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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,850	12/08/2003	Hyung-Bok Lee	P56980	9275
7590 Robert E. Bushnell Suite 300 1522 K Street, N.W. Washington, DC 20005			EXAMINER BOATENG, ALEXIS ASIEDUA	
			ART UNIT 2838	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	
3 MONTHS			02/05/2007	
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/728,850

Applicant(s)

LEE ET AL.

Examiner

Alexis Boateng

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 19-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 – 11, 13 – 17, 19 and 20 are rejected under 35 U.S.C. 102(e), in the alternative as being anticipated by Nortoft (U.S. 6,773,848).

Regarding claim 1, Nortoft discloses wherein a pouch-type secondary battery unit, comprising:

a first secondary battery cell comprising a first secondary battery body and a first case (figure 1b, item 1; col. 3 lines 65 – col. 4 lines 4), the first secondary battery body being disposed inside the first case, the first secondary battery cell further comprising a first positive electrode terminal and a first negative electrode terminal perforating out from said first case (figure 1, items 2 and 3);

a second secondary battery cell comprising a second secondary battery body and a second case (figure 1b, item 1'; col. 3 lines 65 – col. 4 lines 4), the second secondary battery body being disposed within the second case, the second secondary battery cell further comprising a second positive electrode terminal

and a second negative electrode terminal perforating out from said second case (figure 1, items 2' and 3');

and a safety circuit board disposed in an external void within said battery unit (figure 2a, item 5), said external void being defined as being in between the first and second secondary battery cells, the safety circuit being electrically connected to the first and second positive electrode terminals and to the first and second negative electrode terminals (figure 2b).

Regarding claim 2, Nortoft discloses wherein the first and second cases each comprise: a case body having a space for accommodating one of the first and the second battery bodies (column 3 lines 65 – column 4 lines 5); and case cover coupled to the case body to seal the battery body contained within the case body (column 3 lines 65 – column 4 lines 5).

Regarding claim 3, Nortoft discloses wherein each case body comprises a flanged portion (figures 1b – 2b) wherein the outer case shows flanged portions), the positive and negative electrode terminals perforating the respective case at the flanged portion of the case body (figures 1b and 2b).

Regarding claim 4, Nortoft discloses wherein the first battery cell and the second battery cell are positioned so that the first positive electrode terminal is disposed near the second positive electrode terminal and the first negative terminal is disposed near the second negative electrode terminal (figure 1a items 2, 2', 3, and 3').

Regarding claims 5 and 9, Nortoft discloses wherein each of the battery bodies being helically wound positive and negative (figure 4e).

Regarding claim 6, Nortoft discloses wherein a pouch type secondary battery unit comprising:

- a case comprising a body having a plurality of spaces, each one of said plurality of spaces being spaced apart from each other by a predetermined distance (figure 3a; col. 3 lines 65 – col. 4 line 5), said case further comprising a case cover extending from a side of the case body and coupled with the case body to seal all the plurality of spaces (column 3 lines 65 – column 4 lines 5) wherein the case cover is folded such that the spaces are stacked on top of each other (figure 2b);

- a plurality of battery cells (figure 4e and 5d), each battery cell having a battery body and two electrode terminals (figure 2b item 3' and 2'), each battery body being disposed in a respective ones of said plurality of spaces (figure 3a), each of said battery bodies having positive and negative electrode terminals extending outward through the case (figure 3b items 6 and 6'); and

- a safety circuit board disposed in an external void (figure 6b item 5; column 8 lines 15 – 20), the safety circuit board, being connected to each of said positive electrode terminals and the negative electrode terminals of each of said plurality of battery cells (column 8 lines 7 – 20).

Regarding claim 7, Nortoft discloses wherein the case body comprises a flanged portion, the positive and negative electrode terminals extending through

the flanged portion (figure 1b shows wherein the battery case is flanged and terminals 2, 2', 3, and 3' are extend out of the flanged portion).

Regarding claim 8, Nortoft discloses wherein the positive electrode terminals of different battery cells in the battery unit are all aligned with each other and the negative electrode terminals of the different battery cells in the battery unit are all aligned with each other (figure 5d).

Regarding claim 10, Nortoft discloses wherein a case comprising a case body and a cover, the case body being attached to the cover said case body comprising a plurality of spaces (figures 1b and 3a; column 3 lines 65 – column 4 lines 5);

a plurality of battery bodies, each one being disposed in corresponding ones of said plurality of spaces, each of said battery bodies having two electrode terminals perforating said case body (figure 3a; figure 5d);

a safety device electrically connected to said terminals of said battery bodies said case body having a flanged portion that mates with said cover (figure 4e item 11), said safety device being disposed in between two separated sections of said flanged portion when said case is folded onto itself so that each of said plurality of battery bodies are stacked on top of each other (figure 4e item 5 (safety circuit board) and batteries are stacked).

Regarding claim 11, Nortoft discloses in figure 4e wherein said cover of said case being folded onto itself so that each of said plurality of battery bodies are stacked on top of each other.

Regarding claim 13 and 14, Nortoft discloses wherein each of said plurality of battery bodies being comprised of electrode plates stacked on top of each other and not being wound (figure 4e and 5d).

Regarding claim 15, 16, and 19, Nortoft discloses wherein each of said plurality of battery bodies being electrically connected to each other in serial and parallel (column 1 lines 1 – 7).

Regarding claim 17, Nortoft discloses wherein a plurality of secondary battery cells, each battery cell comprising a battery body disposed in a sealed case (column 3 lines 65 – column 4 lines 5), each battery cell further comprising a pair of electrode terminals of opposite electrical polarity electrically connected to said battery body and perforating said case (figure 2b items 2, 2', 3, and 3'); and

a safety circuit board being electrically connected to the terminals of each said plurality of battery cells, said safety device being disposed in such a way as to not add to the size of the unit (figure 4e item 5), each of said plurality of secondary battery cells being stacked on top of each other (figure 4e), each of said cases having a flanged portion protruding outward from the battery body, (figure 2b items 2, 2', 3, and 3'), wherein a void is formed between the flanged portions of adjacent stacked battery cells (figure 4e item 11), said void being external to said sealed case, said safety device being disposed within said void (figure 4e item 5).

Regarding claim 20, Nortoft discloses wherein said safety circuit board being one of or both of a positive temperature coefficient device and a safety vent (column 5 lines 57 – 65)

Response to Arguments

3. Applicant's arguments filed 11/30/06 have been fully considered but they are not persuasive. **Regarding claim 1**, the applicant argues that the circuit board is sandwiched in between the cells and there is no teaching of a gap or void within the circuit is disposed. As shown in figure 2b, the circuit board, item 5 is located in between the battery cells, wherein there is a void which is external to both batteries because the battery cells are not touching, they are only connected by the terminals, items 2 and 3.
4. **Regarding claim 2**, the applicant argues that the Nortoft reference does not disclose a case cover coupled to the case body to seal the battery body contained within the case body. Nortoft discloses in figure 6a wherein flaps, item 14, cover the battery cells and coupled to case body as disclosed in column 8 line 66 – column 9 line 24.
5. **Regarding claim 3**, the applicant argues wherein that the flanged portion of Nortoft has not been identified. The applicants drawing and specification show that the flanged portions are in figure 3a items 22a and 32a. These flanged portions are exactly the same as the flanged portions shown in Nortoft's figures and 1b and 2b wherein items 2, 3, 2' and 3' are protruding from.

6. **Regarding claim 5**, the applicant argues wherein the Nortoft system does not show helically wound positive and negative electrode plates. Nortoft discloses in figure 4e and 5d wherein the electrochemical cells are wound helically by the positive and negative electrode plates.

7. **Regarding claim 10**, the applicant argues wherein the Nortoft system does not disclose wherein case comprising a case body and a cover. Nortoft discloses in column 8 lines 15 – 56 wherein electrochemical cell is packaged within a flexible package, which is a cases and uses a flaps, item 14, to cover the cells.

8. **Regarding claim 17**, the applicant argues wherein the Nortoft system the does not have a void external to said sealed case. Please see arguments above.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexis Boateng whose telephone number is (571) 272-5979. The examiner can normally be reached on 8:30 am - 6:00 pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on (571) 272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AB


Adolf Denekor Berhane
Primary Examiner